

# HOOSIER SURVEYOR



QUARTERLY PUBLICATION OF THE  
INDIANA SOCIETY OF  
PROFESSIONAL LAND SURVEYORS, INC.

VOLUME 18  
NUMBER 2  
FALL 1991



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## Indiana State Board of Registration for Land Surveyors

(Indiana's First Separate Registration Board, 1991-92)



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 VOLUME 18 NUMBER 2 FALL 1991  
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**EDITOR'S NOTE**

Deadlines for copy for various planned issues of the HOOSIER SURVEYOR are as follows: Winter issue: December 31, Spring issue: March 31, Summer issue: June 30, Fall issue: September 30.

The HOOSIER SURVEYOR is published quarterly by the INDIANA SOCIETY OF PROFESSIONAL LAND SURVEYORS, to inform land surveyors and related professions, government officials, educational institutions, libraries, contractors, suppliers, and associated businesses and industries about land surveying affairs.

Articles and columns appearing in this publication do not necessarily reflect the viewpoints of ISPLS or the Hoosier Surveyors staff, but are published as a service to its members, the general public and for the betterment of the surveying profession. No responsibility is assumed for errors, misquotations or omissions as to its contents.

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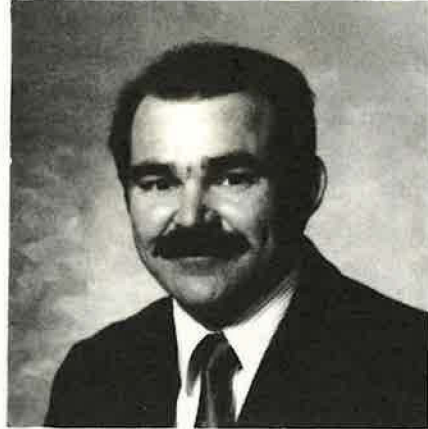
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## PRESIDENT'S THOUGHTS

by Ross Holloway, ISPLS President, Martinsville, IN



What a year this has been. Revised / updated surveying standards have been adopted and are now in effect. The Board of Registration for Professional Land Surveyors is now a reality. ISPLS has come of age.

It is my opinion from the efforts and dedication of many of you, that this society has grown immensely in stature and recognition among not only those in surveying related professions but also in the eyes of the public at large. I believe this new found public and professional respect began with our societies birthing, and subsequent adoption, as Indiana Administrative Code, minimum surveying standards. Through our vigilance and perseverance we have become known as an organization that can get things done and perhaps even envied by other related professional societies.

However, we cannot and must not set back on our accolades and retreat, for even a moment, from those things before us which will enhance our profession. Professional enhancement includes a whole myriad of things such as educational standards, strength of exam, standards of performance, continued education, etc. The benefits of pursuing professional growth all begin with the word "IMPROVED": improved image, both professional and self; improved service to the public; improved financial status. I could elaborate on these but now is not the place. Let it suffice to say that if professional enhancement is not pursued, by the individual surveyor as well as the society, then stagnation will soon set in.

A few years ago, under the guidance of John Schneider, ISPLS had a goal setting seminar where several issues were discussed relevant to the future objectives of the society. Out of the seminar came the number one goal of a separate board of registration for land surveyors. This goal having been met earlier this year, I was encouraged to have another goal setting seminar to provide an opportunity to re-focus and reaffirm the direction the society was going to take over the next few years. To that end, in October the Board of Directors and others met with a professional facilitator and we adopted the five goals you will see outlined later in this publication.

As members of this society we are pledged to improving the profession and protecting the public. By supporting these goals, and your society officers and the board of directors as they strive to achieve them, you will

be assuring the continued growth and prosperity of your profession.

This is the last time I will be speaking to you from this page. In the next issue Mr. Randy Sexton will have the privilege of addressing you. The past year has been both hard work and immensely fulfilling on a personal as well as professional level. In the position of president of the society I feel somewhat like the captain of a ship. Getting from point A to point B takes more than a captain standing at the helm. It takes the dedication and sweat of a hard working crew. During this past year there have been many, many people who have been my crew, making my job easier by pitching in with committee assignments, appearances at public meetings, and giving me much needed advice. To those of you who worked so hard, I thank you, and a special thanks to Dianne Bennett without whom nothing would get done.

I want to leave each of you with a thought: as we approach the holiday season we all have many things to be thankful for, health, family and home. All of these things must be given our time and attention or they soon begin to disintegrate. Your professional society is no different. Please support and participate in ISPLS. You will never be sorry.



## ISPLS GOALS/ACTION PLANS

Established October 12, 1991

- I) TO EDUCATE THE REGISTERED LAND SURVEYOR ON THE BENEFITS OF PROFESSIONAL COMPLIANCE BY DECEMBER 1992.
  - A) Develop a program for Education by 6/92
    - 1) Preliminary by 1/92
    - 2) Final by 6/92
  - B) Adopted by Board
  - C) Implementation of Program by 12/92
    - 1) Program
      - a) Benefits
        - 1) Level Playing Field
        - 2) Decrease Liability
        - 3) Protect Public
        - 4) Protect the Innocent
        - 5) Image
        - 6) Easier Information
        - 7) Fees
      - b) Develop ways to portray to membership
      - c) Programs
- II) TO PROMOTE THE FOUR (4) YEAR LAND SURVEYING PROGRAM AT PURDUE UNIVERSITY.
  - A) Foster an open relationship with the society and the School of Civil Engineering.
    - 1) What the Society doing/will do
      - a) Support the legislation to required degree
      - b) Freshman Engineering orientation
      - c) Career days at high schools
      - d) Up-to-date equipment
      - e) Co-op vs summer camp
    - 2) Meeting with Dean at Purdue University
    - 3) Vincennes University and other regional campus transfers.
  - B) Develop programs to promote profession in High Schools by 9/92.
    - 1) Scholarships
    - 2) Trig-Star
    - 3) Summer Employment
    - 4) Career days/provide equipment
    - 5) Guest / with problems
  - C) Provide Literature Support by 1/93
  - D) Middle School and Grade School
- III) BY JULY 1992 DEVELOP A SPEAKERS PROGRAM
  - A) Identify resources already available through ISPLS, ACSM, etc.
  - B) Develop a speakers bureau for making presentations on an as-needed/as-requested basis.
  - C) Identify the major points to be emphasized (to be completed by the ISPLS Board)
  - D) Develop a form for the presentation which addresses each major point (i.e. pamphlet, slide presentation, informative talk, showing of a film, etc.)
  - E) Identify specific audiences
    - 1) Identify the location of the presentation
    - 2) Determine the appropriate nature of the presentation
    - 3) Schedule the presentation
  - F) Establish a procedure for promotion of the speakers bureau and PR program on a state-wide and on a local level.
- IV) MANDATORY PROFESSIONAL DEVELOPMENT BY 1994
  - A) Gain Enabling Legislation by 1993
    - 1) Identify the benefits for each target audience
      - a) Professional Surveyor/ISPLS Members
      - b) County Surveyors
      - c) Registration Board/Attorney General
      - d) Legislators
    - 2) Make presentations to each target audience to explain benefits and solicit support by 1992.
      - a) Professional Surveyors/ISPLS Members
        - 1) At annual meeting
        - 2) Hoosier Surveyor article(s)
      - b) County Surveyors
        - 1) At Association of Indiana Counties meeting
        - 2) Hoosier Surveyor article(s)

(Continued on Page 5)

## Governor Bayh Signs House Bill 1679 with Representative Sheila Klinker

*The Creation of a Separate Registration Board for Land Surveyors*



Seated are left to right: Representative Sheila Klinker, Governor Evan Bayh, Patrick Cunningham (Chairman Governmental Affairs)  
Standing left to right: Wesley Day (Whiteland), Dianne Bennett (ISPLS Admin. Secretary), Jacob Hall (Indianapolis)

ISPLS would like to thank Representative Sheila Klinker, from Lafayette, Indiana for her dedication and support of ISPLS and the land surveying profession.

Rep. Klinker has worked on ISPLS legislative goals since 1984 when she first introduced legislation for continuing education, and has continued to be a major influence on the changes within the profession that are occurring today. She has always made herself available to plan legislation and to advise and guide ISPLS on our legislative endeavors.

ISPLS is deeply indebted to Rep. Klinker for her service and will be forever grateful.

Patrick N. Cunningham  
Chairman, Governmental Affairs

## BOARD OF DIRECTORS MEETINGS

August 10, 1991  
by Mike Crawford, reporter

### (MINUTES CONDENSED)

President Ross Holloway called to order the meeting of ISPLS Board of Directors at 10:00 A.M. on August 10, 1991. The meeting was held at the Society's headquarters in Indianapolis with ten officers and directors and three guests in attendance.

President Holloway noted that he would advise the Education Committee of the need for workshops to produce a profit. Meanwhile, Dianne Bennett was to review Board minutes to clarify policy on profits.

A 1992 convention update was given by E.R. Gray on possible programs being considered and Doug Herendeen submitted a budget and contracts with the Adam's Mark Hotel for the 1993 convention. Also, a motion was made and passed to reserve space for an ISPLS workshop following the 1993 convention.

The Government Affairs Committee presented a copy of a letter recently sent to certain legislators, which thanked them for their involvement in the passage of House Bill 1679.

It was recommended by the Headquarters Committee that the Society renew its lease at the current office location for three years. The fixed rate for this space is \$9.50 per square foot.

A motion was made and passed to accept the membership application of Michael L. Bishop (member).

An allocation of \$400 was approved for booth space at "Focus on the Future". The theme of the exhibit is: "Exploring Careers in Surveying".

Ross Holloway reported on the continuing discussions with Leagre and Barnes concerning a separate scholarship foundation. On a related topic a number of options regarding scholarships and foundations were examined. also, an Ad Hoc committee was established to investigate revisions to the scholarship foundations at Purdue and Vincennes, as well as the feasibility of a new foundation.

Wes Day reported that the new law (Rule 13) would go into effect on August 16, 1991.

The Public Relations Committee was asked to look into ways to recognize those counties actively involved in section corner perpetuation.

Under new business, a goal setting seminar was scheduled October 12, 1991. A convention time slot for the topic of Quality Based Selection (QBS) was requested by Jerry Carter. CEI-ISPLS consented to filing a Friend

of the Court Brief regarding Kelley & Krueer v. Ten Ech, et al case.

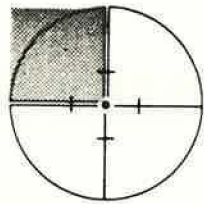
The next Board of Directors meeting was scheduled for September 21, 1991 at the Headquarters. This meeting stood adjourned at 12:45 P.M.

\* \* \* \* \*

### ISPLS GOALS

(Continued from Page 3)

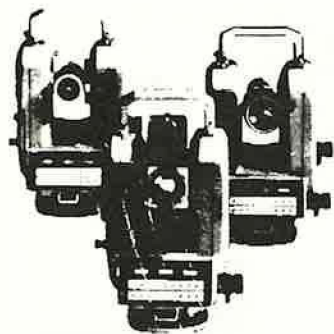
- c) Registration Board / Attorney General
  - 1) By "lobbying" individual members
  - 2) At Board meetings
- d) Legislators
  - 1) "Minuteman" contact of each legislator by ISPLS members
  - 3) Prepare Legislative Package
    - a) "Minuteman" contact of each legislator by ISPLS members
    - b) Gain House and Senate sponsor(s)
    - c) Testify in House and Senate committee hearings
- B) Development of System
  - (Conceptual Plan in 30 days)
  - (Final Proposal for ISPLS Board approval in 6-9 months)
  - (To be implemented first as a voluntary ISPLS system)
  - (To be developed with extensive Registration Board input)
  - 1) Establish units of measure
  - 2) Establish control measures to ensure integrity of system.
  - 3) Establish record keeping method.
    - a) Study existing alternatives
  - 4) Identify benefits of participation
  - 5) Establish incentives for participation.
- C) Present to Registration Board for Adoption as Rules by 1994
- V) INVESTIGATE THE REQUIREMENTS FOR CREATION OF THE OFFICE OF "STATE SURVEYOR".
  - A) Legislative regulation
  - B) Office functions (Specify)
  - C) What states have similar position?
  - D) Funding?
  - E) Build need documents



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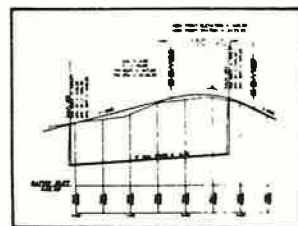
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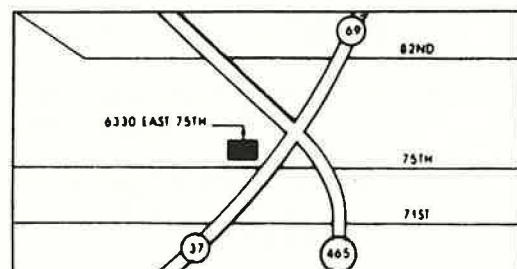
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## REGISTRATION BOARD HAPPENINGS

### LAND SURVEYOR'S LICENSE SUSPENDED INDEFINITELY

On October 22, 1991 the Board took disciplinary action in the case of Richard Bever, LS80040062, Cause No. SBRLS 91-02, stemming from his failure to comply with the provisions of the standards of competent practice (864 IAC 1.1-13-1) and issued an order indefinitely suspending his land surveyor registration, effective November 15, 1991. He may not petition the Board for reinstatement of registration for a period of one year.

The record indicates that the respondent prepared certain land surveying documents dated March 27, 1990 that were not in compliance with the standards stated above. In particular, there was no indication on the plat of the class of survey; there was no written surveyor's report furnished the client giving the surveyor's opinion regarding the cause and amount of uncertainty in the lines and corners used in the survey, the plat did not indicate the basis of bearings; it did not show sufficient notation to identify the source of dimensions; it did not show notations indicating which monuments were found and which were set; it did not show all monuments and evidence of possession beyond the surveyed premises on which establishment of the corners of the surveyed premises are dependent; it did not show the adjoining parcels identified by title description or record reference; it did not contain sufficient data to clearly indicate the theory of location applied in finalizing the location of the corners, the data at variance with this theory, or sufficient data to allow retracement of all pertinent lines and corners shown without difficulty; and it did not indicate data intentionally excluded by the survey; and the description of said survey did not call for the permanent controlling monuments.

The Attorney General of Indiana is empowered to bring disciplinary complaints in the name of the State of Indiana before the Indiana State Board of Registration for Land Surveyors. The Board is charged with the duty and responsibility of regulating the practice of land surveying in the State of Indiana and is empowered to hold disciplinary hearings pursuant to this authority.

### ENFORCEMENT, VIOLATIONS, AND COMPLAINTS

Effective August 16, 1991, registered land surveyors shall comply with 864 IAC 1.1-13. Rule 13 establishes minimum standards for competent practice of land surveying as required by IC 25-31-1-7. This is a revision of the standards which have been in effect since July 21, 1988. Failure of a registered land surveyor to comply with provisions of this rule may subject the registrant to sanctions as provided by IC 25-31-1-22.1.

Pursuant to 864 IAC 1.1-11-23, "If a land surveyor has knowledge or reason to believe that another person or firm may be in violation of any of these provisions (Rule 11, Rules of Professional Conduct), he shall present such information to the board in writing and shall cooperate with the board in furnishing such further information or assistance as may be required by the board."

Violations shall be filed on a complaint form with the Consumer Protection Division of the Attorney General's office. Complaint forms may be obtained by calling Consumer Protection, 1-800-382-5516. Upon receipt of the complaint, the Consumer Protection Division in conjunction with the Registration Board's Complaint Liaison, will investigate the complaint. Upon investigation, it may be determined that there was no grounds for the complaint, complaint may be resolved, or the matter may come before the Board in a disciplinary hearing.

### BOARD TO ASSIGN FIRM OR GOVERNMENTAL AGENCY IDENTIFICATION NUMBERS

864 IAC 1.1-13-19(a)(2) requires in part that monuments shall have a cap permanently affixed thereto showing the registered land surveyor's professional license number and/or the name or identification number of the land surveying firm or government agency.

Firms and government agencies are experiencing problems with regard to the identification of the registered land surveyor due to registrant changing employment.

Section (c) of rule 19 states in part that any identification numbers, other than registered land surveyor's registration number, used by a land surveying firm or government agency must be assigned and authorized for use by the State Board of Registration for Land Surveyors upon written request.

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September 24, 1991

Mr. Danny Leek  
Indiana Society of Professional Land Surveyors  
c/o Morley Associates  
605 Southeast Martin Luther King, Jr. Boulevard  
Evansville, Indiana 47713

Dear Mr. Leek:

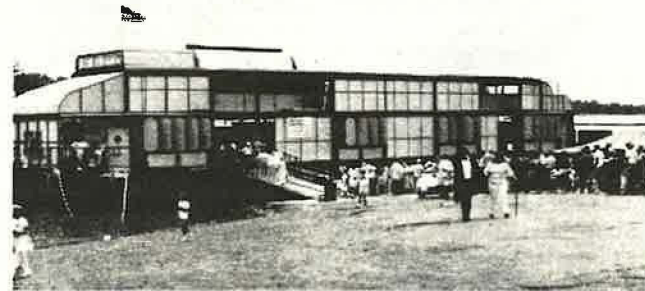
On behalf of the Center City Corporation and Always A River Steering Committee please accept my thanks for your generous donation of volunteer services for Always A River -- Evansville's Heritage Festival.

The entire project was a tremendous success! I am pleased to announce capacity crowds toured the exhibit throughout the weekend. Your contribution allowed Center City to provide our community with this once-in-a-lifetime opportunity. Although the barge was docked here for only four days, I hope our community continues to look to the Ohio River as not only a beautiful resource to use wisely but a community gathering place as well.

Thanks again for your support!

Sincerely,

*Patty Mendel*  
Patty Mendel  
Steering Committee Chairman



*Presented in recognition  
of outstanding support  
to*

**INDIANA SOCIETY OF PROFESSIONAL  
LAND SURVEYORS**

*on behalf of*  
Always a River  
and  
Illinois Humanities Council  
Indiana Humanities Council  
Kentucky Humanities Council  
Ohio Humanities Council  
Pennsylvania Humanities Council  
West Virginia Humanities Council

1991

*Thanks goes out to the many ISPLS members who volunteered their services to man the barge at the Indiana/Kentucky stops on its way down the Ohio River.*

**QBS FACILITATOR ON BOARD**

Implementing a Qualifications Based Selection program in Indiana became a reality when the QBS Indiana Council selected Jerry Ginthner as the QBS facilitator.

Ginthner brings a wealth of experience and skill to QBS having managed local chambers of commerce for fifteen years and a construction trade association throughout Indiana.

QBS coalition chairman, Jake Hall, of United Consulting Engineers & Architects, Inc. stated, "With the hiring of an experienced professional such as Jerry, our program holds great promise of being successful and I know will earn the support of the design professional community."

Ginthner has already begun to organize the program which will provide information and service to public bodies to enable them to select a design professional firm based on their qualifications and competence in meeting the needs of the owner.

\* \* \* \* \*

**NEW BOOK ANNOUNCEMENT**

**Land Survey Review Manual  
by R.B. Buckner**

A new book containing a review of basic surveying, boundary law and retracement principles, land platting, engineering aspects of land subdivision, with multiple choice questions on each topic, and more. The content is built around the NCEES land surveying exam syllabus and surveying as generally practiced in the U.S. It is suitable for both exam review and general use by others. A unique feature is a thorough discussion of each question and problem with emphasis on how to analyze multiple choice questions, including discussion of each incorrect answer. The book contains ample text discussion in a review format, 335 multiple choice question/problems with solutions and discussion, annotated list of suggested references, how to read and analyze exam questions, and the NCEES exam formats. Paperback, 440 pages.

To order, send \$48.00 plus \$3.00 mailing to author at 1816 Alpine Rd., Johnson City, TN 37604, or order from Landmark Enterprises. The book is sold by Land Surveyors Workshops, POB Publishing, and others. Shipping costs may vary among dealers.

**INDIANA COUNTY SURVEYORS  
ASSOCIATION NEWS**

by E.R. Gray, III

Indiana County Surveyors Association met at the 1991 Annual Association of Indiana Counties Conference, October 2-4, in Fort Wayne, Indiana. After a brief business meeting, guest speakers, John Richardson with the Corps of Engineers and Mike Litwin with the Fish & Wildlife discussed wetlands and federal permits required for drainage projects.

Steve Cash, of the Hamilton County Surveyor's office, presented the 1991 Survey of Indiana County Surveyors. Steve did a super job on the Survey, a copy of which has been received at I.S.P.L.S. Headquarters.

Thanks to Intergraph for sponsoring the luncheon. Also, to Wilber Peak for arranging speakers, and Kent Ward for arranging the luncheon sponsor.

Honored at the evening awards banquet was Larry Fisher, Marshall County Surveyor, as Outstanding County Surveyor 1991.

Congratulations Larry!

Indiana County Surveyor Association Officers include:

*President:* E.R. Gray III, L.S., Bartholomew County Surveyor  
*Northern Vice President:* Wilbur E. Peak, L.S., Elkhart County Surveyor  
*Southern Vice President:* Jeff Souder, L.S., Washington County Surveyor  
*Central Vice President:* Kenton C. Ward, Hamilton County Surveyor  
*Secretary/Treasurer:* Larry Fisher, L.S., Marshall County Surveyor



Larry Fisher, L.S., Marshall County Surveyor (center) receives Outstanding County Surveyor from I.C.S. President E.R. Gray (left) and A.I.C. President Steve Sharp (right).

## EDUCATIONAL ASPECTS OF PROFESSIONALISM

by Jud Rouch, Little Rock, Arkansas

*The following article, prepared by Jud Rouch is a re-edited version of a paper that he presented to the Western Federation of NSPS affiliates during their convention at Phoenix, AZ in June 1989. Some of the content was taken from a presentation that Paul Lapham gave at the 1987 Surveying Teachers Conference in Madison, Wisconsin. Paul is a private practitioner in Michigan and a past president of NSPS.*

*Jud Rouch is an associate professor at the University of Arkansas at Little Rock (UALR) where he is the coordinator of the baccalaureate program in Surveying and Land Information Systems and is the director of the GPS Research and Training Laboratory. He has taught at UALR and at Purdue University. Prior to his teaching career he was in private practice. He is the president of the Arkansas Society of Professional Surveyors and is a past president of the Indiana Society of Professional Land Surveyors. He serves on several ACSM committees and is chair of the constitution & bylaws committee. He has made a number of presentations to various NSPS Affiliates throughout the United States.*

One of the most often expressed comments by surveyors in the United States is that the surveyor's image needs to be improved. This is most often said in the context of professionalism. What is the meaning of this often-stated goal? Is it something realistic, or is it elusive and unattainable?

Before we can analyze any part of an entity, we must define the whole. What is professionalism? I've heard it said that it is the result of the labor of professionals. We then must ask; what is a professional? Some say it is a person who is an expert in his or her field of endeavor. Others say that anyone who is paid for a task is a professional. An athlete becomes a "professional" merely by signing a contract. Does the conduct of professionals so defined, become professional merely because they are paid for their effort? No, certainly not! We then must look elsewhere for our definition of professionalism.

Professionalism is that element of customary conduct that is expected from members of a profession. A profession is a vocation that has specific rules and traditions that must be followed by the individuals who engage in that vocation. There are six essential components of a profession to be considered. These are:

1. A significant amount of formal education as a requirement for entrance into the profession.
2. Passage of an adequate objective examination to ensure minimum entry level competency.
3. Self policing to control or eliminate incompetent practitioners.
4. Participation in ongoing programs of continuing education and professional development as a requirement to continue in the profession.
5. Mutual cooperation among members of the profession.

### 6. Public knowledge of and esteem of the profession.

It is obvious that we American surveyors are quite concerned with number six. This desired esteem will not exist if the other five elements do not concurrently exist. In this discussion I want to concentrate primarily on the first and briefly on the fourth of these elements.

How do we determine the necessary level of formal education that should be required for entrance into the profession? We make the determination based on the necessary knowledge base needed to practice surveying today. This needed knowledge base dictates that a four-year degree in surveying is needed as an entry requirement into the surveying profession.

Prior to about 1960 adequate hours in surveying subjects were included in the typical baccalaureate program in civil engineering to properly prepare those who chose to make surveying their vocation. In the three decades that have followed, surveying courses have been eliminated from these civil engineering curricula. During this same time period, the techniques and instrumentation of surveying have changed completely. Training as a civil engineer no longer prepares one to be a surveyor!

While surveyors of a few years ago could make their needed measurements with a theodolite and steel tape, they now must understand the use and application of electronic distance measurement, total stations, and global position system receivers. Previously, they could prepare their plats with simple drafting instruments. Now they must be knowledgeable in computer-aided design and geographic information systems. Boundary record data is now often stored in magnetic medium and accessible through computer systems where it was formerly recorded in volumes of record books. The

necessary application of random error propagation is becoming more important all of the time.

The majority of the surveyors with the engineering degrees granted during the era when surveying subjects were included in their curricula are at retirement age. In the intervening years an apprentice route into the surveying profession has been followed. The system does not often prepare a person to perform at the professional level needed in today's complex vocation of surveying, unless it is combined with a rigorous routine of self study or evening vocational schooling. In most instances, this apprentice system creates technicians rather than professional surveyors. While surveying will continue to need these technicians, it also must have an input of properly educated young people or it will not continue to be a viable profession.

We in the surveying and mapping fields are moving rapidly from being collectors of data to being managers of both data and business. We will continue to make intricate measurement and evaluate boundary evidence, for which we will need sound technical education, but we will also have to exhibit superior management skills. Are we prepared? Historians of the future will refer to this decade as the beginning of a new era; some say that it will be called the Information Age. Will surveyors be among the leading professions in this Information Age? What profession will take the lead in Land Information Systems? Surveyors should, but will they? If not, why not?

If not, it will be due to the lack of training in a most important aspect of a surveyor's education--the aspect of good business management. In addition to the necessary usual technical topics, surveyors must learn the diversity needed in management, in business principles, in interpersonal relationships, and in communication for the Information Age.

Today, we need surveyors who are educated in the technical and evidence research and evaluation areas, and also proficient in such skills as communications, oral and written presentations, business principles, management, marketing, and leadership. Surveyors should know how to price their services so they can survive and prosper in a competitive society. We need to produce not only technical surveyors but surveyors with a total professional potential.

Many surveyors in America aspire to be practitioners in the private arena. The management of a business is a task that few are prepared for. About 90% of the surveying firms started in the United States fail within the first few years. Is it because the surveyor in charge was not technically qualified? No, it was

because he or she was not prepared in the management area. The solution is a four year degree tailored to modern surveying! In addition to technical engineering related subjects, surveyors need courses in communications, both written and oral. This includes aesthetic writing, to put forth our thoughts and to make a presentation in written form so that someone else can very clearly understand what decisions we have made and how we arrived at them. Oral communication is also important. We often need to make verbal presentations, but that is an area of communication training that we often overlook.

Another area that is usually very weak without formal training is interpersonal communications, an area that we sometimes look at a bit disdainfully. We say that is for the philosophers and the sociologist. Well, it had better also be for the surveyors. Where do we do a lot of our work? In small group situations; in direct relationships between ourselves and our clients; one-on-one, or often two or three of us from a surveying firm with three or four representatives from the client firm. Probably more importantly, a lot of our effort has to go into how we make presentations in various committees such as planning commissions and zoning boards.

We must learn the necessity of a valid contract and the principles of accounting, finance, and the other aspects of basic business management. We need to learn personnel management to communicate well with our employees.

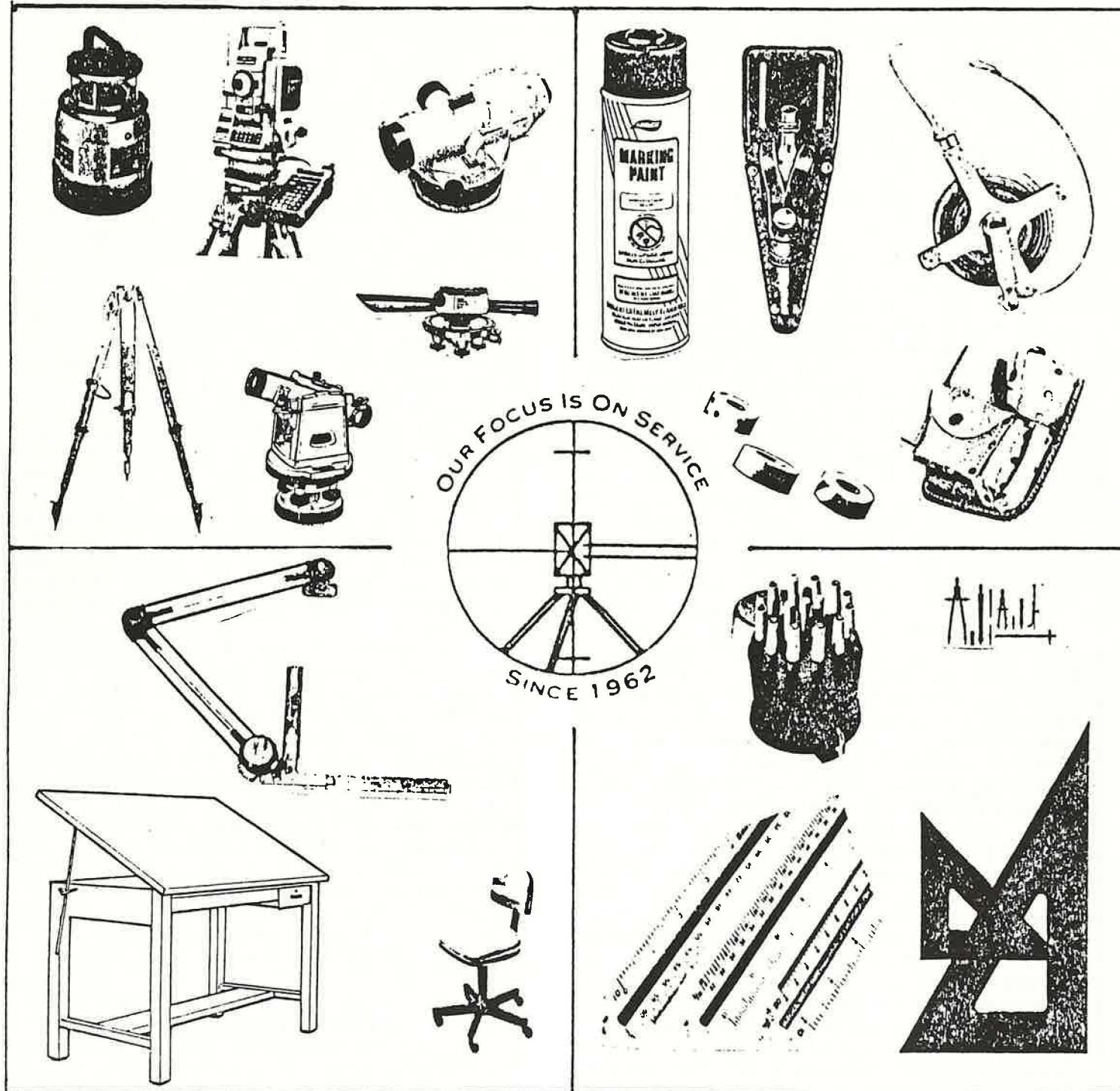
A significant amount of what we in America call general education should be included in the surveyor's baccalaureate degree. Our effectiveness and image is indeed enhanced when we make informed ethical decisions and participate in solutions to humanity's needs. This profession needs to apply its particular expertise to the problems of modern society. Subjects such as sociology and political science will enhance our abilities to interface with the other professions involved in the solution of these problems. We need to return to the type of educational preparation that would again enable a surveyor to become president of our country as Washington, Jefferson, and Lincoln did in the past.

The fourth component of a profession relates to required continuing education as a requirement for continuation in the profession. The needed level of content in future professional development training will mandate that the surveyor have a four-year technical degree, or its equivalent, to understand the material being presented. As an example, one must have a background in math and physics to

(Continued Page 13)

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## Professionalism

(Continued from Page 11)

understand the theory of global positioning systems. Something that is often overlooked, however, is that this continuing education should be structured so that those practitioners who did not obtain a baccalaureate degree in the past can supplement their valuable experience with innovative instructional programs that will allow them to stay abreast of the many changes occurring in our modern technology. It should be designed to broaden their aspects and abilities. It needs to be in a forum that allows and encourages them to share and augment their past learning experiences. For those who need it, refresher training in basic and advanced math subjects should be considered to be a part of their continuing education program.

In summary, a four-year degree in surveying is mandatory to properly prepare for a surveying career in the United States. The curriculum should include substantial amounts of management and communication subject area as well as technical and general education courses. A program of meaningful continuing education must be required for license renewal. We now have the necessary requisite of entry level examination to enter the profession. When we add the educational aspects, that we have discussed, along with mutual cooperation and self policing, the public knowledge of and esteem of our profession will come into being. If we do not add these necessary aspects of professionalism to our chosen vocation, it is in grave danger of being relegated to technical support areas of other professions and will not continue to be a profession of equality with those that it must!

\* \* \* \* \*

## CONGRATULATIONS!

Congratulations to Brenda and Barry Owens on the arrival of their new son, "Kevin Patrick Owens". He arrived on Sunday, November 24th at 1:03 P.M. He weighed in at 12 pounds 1 ounce, and is 23 inches long.

\* \* \* \* \*

Tell Someone They're Doing a Good Job Week: December 15-21, 1991. End the year on a positive note. Give someone you admire a pat on the back and a tip of the hat by saying, "You sure are doing a good job!" If you're sincere, you'll win a friend for the new year.

## COMPLETED CAREER

STEPHEN J. FRANKOWSKI, 42,  
Member, Dies

On October 7, 1991, Stephen J. Frankowski suddenly left us. A Christian, husband, father, brother, son, friend, partner and surveyor - he was all of these, and more.

Steve started his surveying career with Fabian Engineering of Lansing, Illinois in 1968. There he learned the basics, and gained a love for surveying that stayed with him his whole life. At this time, Steve also attended Ball State University and graduated in 1973. Ball State introduced a new love in Steve's life, and that was his wife-to-be, Sally.

After working with Rowland Fabian, L.S., P.E., Steve moved to Warsaw, Indiana and started working with Russell Eck, L.S., P.E., of Bremen, Indiana, further honing his surveying skills.

In 1980, he joined Territorial Engineering in Knox, Indiana, and soon became a partner in the firm. Steve's family grew to include three children, Eric, Ryan and Lisa. Territorial Engineering also grew, and moved into larger quarters in Walkerton, Indiana in April of 1991.

Steve will long be remembered for his open honesty and sincerity in his relationship with fellow workers, clients, and fellow professionals. His loss to family and friends is great and will be long-felt, but God's gaining of a good servant is immeasurable.

\* \* \* \* \*

## NEW REGISTERED LAND SURVEYORS IN INDIANA

The Indiana State Board of Registration for Land Surveyors held the certificate presentation for Professional Land Surveyors on Friday, November 15, 1991. The ceremonies were held at The Westin Hotel, Indianapolis. The following land surveyors were awarded with certificates.

Evan J. Evans - Indianapolis, IN  
Harold Gibson - Greenfield, IN  
William D. Richter - Indianapolis, IN  
Jack Smith - Horton, MI  
David R. Whitacre - Ft. Thomas, KY

Congratulations to all of you!

**INDIANA SOCIETY OF  
PROFESSIONAL  
LAND SURVEYORS INC.**



**40th ANNUAL  
LAND SURVEYORS  
CONVENTION**

**January 15-17, 1992**

**Holiday Inn**

Junction of I-65 at SR 46  
2480 Jonathan Moore Pike  
Columbus, Indiana  
(812) 372-1541

**PROGRAM SCHEDULE**

*Wednesday, January 15, 1992*

**A.M.**  
8:00 - Registration Opens  
8:00 - Committee Meetings  
10:00 - 12:00 ISPLS Board of Directors Meeting  
**P.M.**  
12:00 - 1:00 Board of Directors Luncheon  
1:00 - 9:00 Exhibits Open  
2:00 - 4:00 "Rule 13 and Indiana State Board of Registration for Land Surveyors Update"  
6:00 - 9:00 "Fun Festival" in Exhibit Hall - Food, Fun, and Door Prizes

*Thursday, January 16, 1992*

**A.M.**  
7:00 - 8:00 PAC Breakfast  
8:00 - Registration Opens - Coffee, Donuts and Juices in Exhibit Hall  
8:00 - Exhibits Open  
8:30 - 10:00 **SESSION A**  
"P.C. Computers, Hardware, & Software", Bob Meth, IUPUI, Columbus  
**SESSION B**  
"Land Planning and Zoning, a Planners Perspective" Terce Bergman, Past President National Planning Association  
**SESSION C**  
"Surveying Needs in Industry" Bob Bigelow

10:15 - 11:45 **SESSION A**

"P.C. Computers, cont."  
**SESSION B**  
"Erosion Control in Subdivisions", IDNR, Randy J. Braun, Soil Scientist  
**SESSION C**  
"Surveying a Hazardous Waste Site", Bill Hayes

**P.M.**

12:00 - 1:30 Lunch - Introduction of Exhibitors  
1:45 - 3:15 **SESSION A**  
"Bartholomew County Surveyors Office" an overview, E.R. Gray  
**SESSION B**  
"Conducting Effective Meetings" John Rumpfle, Attorney  
**SESSION C**  
"The Business of Land Surveying" a panel discussion,  
Gary Kent -Moderator

3:30 - 5:00 **SESSION A**

"CAGIS" an Ohio G.I.S. Project,  
Ralph Goldsmith, Cincinnati, OH  
**SESSION B**  
"E.P.A. Regulations that Effect Surveyors", Dave Wagoner, SIECO  
**SESSION C**  
"Business of Land Surveying", cont. Exhibits Close

5:00 - 8:00

Dinner on Your Own  
Return to Holiday Inn for an Evening of Light Entertainment & Socializing

*Friday, January 17, 1992*

**A.M.**

8:00 - Registration Opens - Donuts, Coffee and Juice in Exhibit Hall  
8:00 Exhibits Open  
8:30 - 10:00 **SESSION A**

"CAD and Land Surveying", Jerry Carter, Paul I. Cripe, Inc.

**SESSION B**

"Structuring a Land Survey Business to Meet Your Needs", Otto Schug, Attorney of Business Law  
**SESSION C**  
"Technical Sessions on the Basics of Land Surveying", Art Haase, Professor at Vincennes University

10:15 - 12:15 **Optional Columbus Architectural Tour**

**SESSION A**

"Cogo Software for Auto Cad"  
**SESSION B**  
"Structuring a Land Survey Business" cont

**SESSION C**

"Technical Sessions" cont.

**P.M.**

12:00 - 1:30 Lunch

1:00 Exhibits Close

2:00 - 2:00 Technicians Meeting

2:00 - 5:00 Annual Membership Meeting

6:00 - 8:00 Awards Dinner Banquet and Installation of Officers

8:00 - 9:00 Entertainment from Boggstown Inn and Cabaret

**1992  
LAND SURVEYORS CONVENTION  
"THE DISCOVERY CONTINUES"**

**GENERAL INFORMATION**

**Registration**

The registration fee of \$150 for the convention includes all handouts, refreshments breaks, Thursday and Friday luncheons, Wednesday evening Festival with the Exhibitors, and the Friday evening Awards Banquet followed by lively entertainment. Thursday evening has been left open to allow time for you to relax and visit one of our fine restaurants in Columbus. Later that evening, join us at the Holiday Inn to get reacquainted with old friends, while listening to light entertainment at the piano.

The registration fee for the spouse's program is \$75.00 and includes a like number of meals. A special afternoon tea on Thursday has been planned at the elegant Empire Tea Room in one of the finest inns in the United States. This is outlined more fully in the attached letter.

The student registration fee of \$25.00 includes meetings and luncheons only. Daily registration includes lunch and meetings only. Lunch is assured on pre-registration only.

Please return the attached registration form by December 15, 1991. Late and daily registration will open at 8:00 a.m. on Wednesday, January 15th at the registration booth. Late registration is not encouraged. A \$10.00 surcharge will be added to all late registrants. Late registration received after December 31, 1991 will not be guaranteed handouts or luncheons.

**Exhibits**

Since Exhibitors are a very important part of our Convention we have planned a "fun night" on Wednesday evening. While strolling through the exhibits and signing up for door prizes, you will be able to visit several food "action stations" that will be set up for your

registration table. An additional cost will be charged and attendance will be limited to the first 25.

**LODGING**

The conference events will be held at the Holiday Inn Conference Center located at I-65 and Highway 46. Fine dining, and the convenience and comforts of today are wrapped in the classical surroundings of yesterday. A block of rooms have been reserved for you. Please send in the attached reservation card as soon as possible. A phone number where you can be reached at the Holiday Inn in case of an emergency is (812) 372-1541.

**ENTERTAINMENT**

Three very different nights of entertainment have been planned for you starting with Wednesday evenings festival with the exhibitors. You might even see a few clowns clowning around while you enjoy the food and drinks set up at "action stations" and don't forget to sign up for door prizes that will be given away later that evening.

Thursday evening has been left open for your enjoyment. You may want to explore one of the many fine restaurants that Columbus has to offer. Then, if you wish, come join everyone back at the Holiday Inn to listen to soothing piano music, with your requests granted, while you get reacquainted with old friends and make new ones. (A cash bar will be available.)

The convention will draw to a close on Friday evening with the awards banquet, followed by lively entertainment from the Boggstown Inn and Cabaret in Boggstown, Indiana. Stephanie, who performed on Broadway for several years, is currently teaching dance at I.U. and Chris, the banjo player, who has won several national awards, will be sure to make your evening one that you will long remember. A perfect way to conclude the discoveries you will experience in Columbus.

**SPOUSE/GUEST PROGRAM**  
Please give the attached yellow letter to your spouse or guest. They won't want to miss the special programs we have lined up for them! Wednesday they have an afternoon filled with new discoveries, including, how to give a Swedish Massage. However, Thursday, the tour is limited to the first 46 spouses/guests who are registered.

A history on dolls will be given before we depart for a tour from the Visitors Center on Thursday. After the tour, lunch will be in the Cummins Corporate cafeteria, an excellent example of historic renovation. Previously it was a Victorian mill which produced the first cereal manufactured in the United States other than rolled oats. Thursday afternoon, relax by having afternoon tea at the Columbus Inn while listening to soothing violin music. A slide preview of spring gardens will be given on Friday, before departing to Nashville for an afternoon of browsing the dozens of unique shops.

**FOR ADDITIONAL INFORMATION**

About registration write or call:

ISPLS  
55 Monument Circle  
Suite 1222  
Indianapolis, IN 46204  
Phone: (317) 687-8859

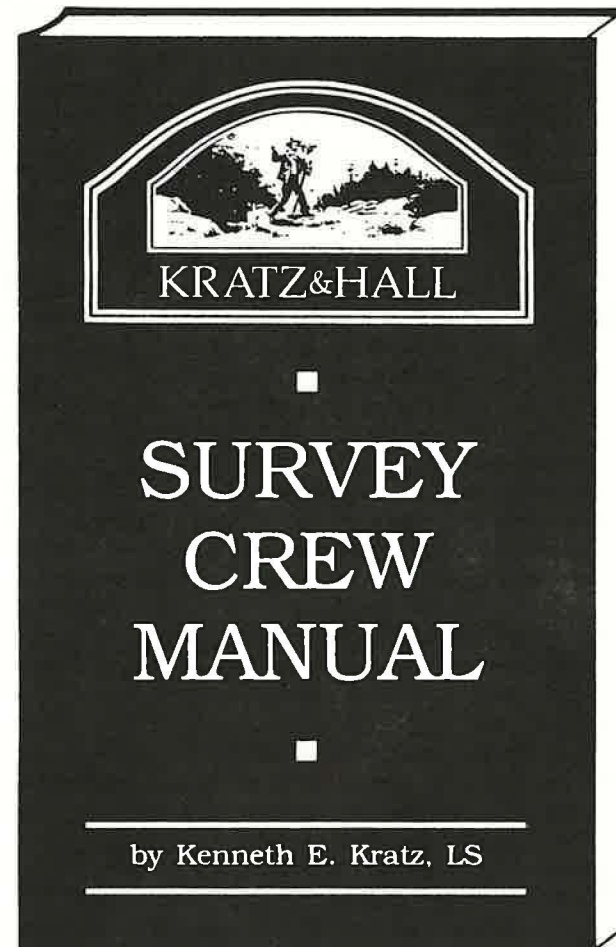
About content, write or call:

Orwic Johnson  
Columbus Surveying & Engineering  
P.O. Box 1171  
Columbus, IN 47202-1171  
Phone: (812) 372-0996

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This manual is intended to help entry-level personnel learn the basic skills needed for field practice. Kratz, a dedicated professional land surveyor for 38 years, spent 20 years compiling all the surveying methods and techniques that he learned or developed, and which he refined over the course of his surveying career.

An invaluable tool for any surveying office, the *Kratz & Hall Survey Crew Manual* sells for \$28.

## NAVD 88 HEIGHT LISTINGS

The National Geodetic Survey (NGS) announces the availability of updated height values for points located throughout the United States based on the North American Vertical Datum of 1988 (NAVD 88). NAVD 88 supersedes the National Geodetic Vertical Datum of 1929 (NGVD 29), which was the height reference (vertical datum) for the United States. NAVD 88 provides a modern, improved vertical datum for the United States, Canada, and Mexico. The NAVD 88 height listings are the result of a mathematical least squares adjustment of the vertical control portion of the National Geodetic Reference System and includes 80,000 km of new U.S. leveling observations undertaken specifically for this project.

The new height listings contain the following information for each NAVD 88 vertical control point (bench mark):

The bench mark designation.

The name of the agency or organization that installed the bench mark.

The orthometric height based on NAVD 88 (and also based on NGVD 29 where available).

The order and class of the survey used to determine the height of the control point.

The most recent year in which the point was included in a survey which produced a height of geodetic quality (year observed).

The latest year recovered, and a code to indicate the condition of the bench mark.

The date (month, day, year) of the adjustment that computed the published height of the bench mark.

The approximate scaled NAD 83 horizontal position (latitude and longitude) of the bench mark.

The plot number (provides a way to determine the proximity of control points).

The permanent identifier or Archival Cross Reference Number.

The state in which the bench mark is located.

During 1991-92, NGS will publish information for other bench marks that were removed from the adjustment because they involved older data that did not fit the latest observations, were in vertical crustal motion regions, or for other reasons. These bench marks are called "posted" because data for them will be published after the initial NAVD 88 publication date (post-NAVD 88). Posted bench marks are distributed throughout the United States and comprise

about 20 percent of the total number of bench marks in the vertical network. Bench marks posted in areas of significant crustal movement, such as southern California, the vicinity of Phoenix, Arizona, southern Louisiana, and the vicinity of Houston, Texas, will be published in the form of special reports.

NAVD 88 height listings are distributed in blocks of 1° of latitude by 1° of longitude. Each block includes a sketch showing the distribution of NAVD 88 bench marks in the area and an explanation of the terms, codes, and attributes used in the listing. ASCII data files, similar to the height listings, are available on magnetic media (tape, diskette) for points included in the general adjustment. The prices are as follows:

### Paper-Copy Listings:

Booklets of 1-25 sheets (1 to 50 pages) \$20 each

Booklets of 26-50 sheets (51 to 100 pages) \$40 each

Booklets of 51-75 sheets (101 to 148 pages) \$60 each

Booklets of 76 or more (149 or more pages) \$80 each

Listings on computer diskette: \$98 for the first diskette. If additional diskettes are required \$15 for each diskette required

Listings on Magnetic Tape: \$98 for each tape required

Prepayment is required. Please make your check or money order payable to: NOAA, National Geodetic Survey. You may also order by using VISA, MasterCard, or American Express. A 25% surcharge, covering postage, is added to orders sent outside the United States. All funds submitted to NGS must be payable by a U.S. bank. To order NAVD 88 height listings or to obtain more information, contact:

National Geodetic Information Center  
N/CG174, Rockwall Building, Room 24  
National Geodetic Survey, NOAA  
Rockville, MD 20852  
Telephone: 1-301-433-8631

# BANKRUPTCY: NO EASY WAY OUT

*Charlatans will insist that bankruptcy is an easy way to avoid responsibility for repaying debts. Don't believe it!*

Personal bankruptcy is designed to provide relief from heavy financial obligations that might result from unexpected events—such as major illness, job loss, or death of a spouse. People who declare bankruptcy lightly assume they will be given a fresh start free from debts. However, happy assumptions usually come with strings and bankruptcy is no exception.

Here are some unpleasant snarls you will encounter if you file for personal bankruptcy:

- You must pay attorney fees and filing fees. These can be substantial.
- Bankruptcy proceedings are public. Friends and neighbors will know your personal business.
- Your credit record carries the blemish of bankruptcy for 10 years. This can greatly affect your ability to gain further credit, because it is legal for lenders to deny loan requests in cases of bankruptcy.
- Certain debts are not excused. You must still pay all taxes and child support.

These conditions tend to diminish the brightness of bankruptcy's promise. And there might be a better way to deal with more debt than you can handle.

Debt counselors recommend the following alternatives to bankruptcy:

1. Contact creditors, state your current financial situation, and work out a repayment plan that may involve reduced payments. Avoiding creditors is the worst thing you can do. If you ignore overdue notices, the account may go to a collection agency whose only interest is to collect the payment. The creditor, on the other hand, wants payment, but is also interested in keeping your business.

2. Set a realistic budget and stick to it.

3. Develop new money management habits that include
- budgeting an amount to save each month;
  - putting credit cards away until the debt is gone, then using them only if you can pay the balance in full when the statement arrives;
  - avoiding the "shop for fun" syndrome to cheer yourself up;
  - distrusting ads that tell you how much you deserve the product—and how easy it is to buy it on easy credit.
4. Seek the help of a nonprofit financial counselor. Learning to manage your finances without bankruptcy can bring you a sense of accomplishment and well-being. That is a promise *without* any strings!

## How Can You Spot Financial Trouble?

Two or more of these warning signs could signal money problems:

- Dipping into savings or borrowing to pay off everyday bills
- Mounting use of credit card cash advances
- Paying only the minimums due on credit card accounts
- Delaying payments for essentials such as utilities and health care in order to pay credit card bills
- Owing more than 20 percent of take-home pay on installment, credit card, and other non-mortgage loans.

If two or more of these apply, warns Elizabeth Scannell, University of Vermont Cooperative Extension Service, you may have too much debt.

For a simple tool to evaluate your own spending habits, send \$1 to: Extension Publications, Montana State University, Bozeman, MT 59717. Ask for the Check Register Tracking System.

## MAPMAKING A BORDERLINE OCCUPATION

by Henry Goldman  
the Cincinnati Enquirer, August 27, 1991

Heads are spinning at the Replogle plant outside Chicago these days. They make globes there - 5,000 a day.

The miniature worlds bob up and down on ceiling-high conveyor belts that zigzag through the building. The spheres end up at a machine that tosses them into a furious spin while a spray gun covers them with a lacquer finish.

By the time the lacquer is dry, the world has changed.

That's how fast events are moving these days. The upheaval in the Soviet Union has turned more than a few heads at Replogle, the world's largest globe manufacturer.

"I am interested in the developments over there as a citizen, sure," says LeRoy Tolman, Replogle's chief cartographer. "But I am also selfishly interested. I keep finding myself hoping that these new nations don't make it - because I just printed that map!"

### Tracking changes

It was hard enough dealing with the unification of Germany. Now cartographers face the prospect of dealing with several (former?) Soviet republics that have either declared their independence or announced their intention to secede.

The large question: When does the fervor of the crowd become the reality of a new nation?

The small question: If the secessions stick, what happens to Kaliningrad, a bit of land on the Baltic Sea, separated from the Russian mainland and surrounded by Poland, Byelorussia and Lithuania?

For now, Tolman and representatives of the nation's largest mapmakers are standing pat.

"We are sort of waiting for things to happen before we proceed," says Chuck Lees Jr., cartographic editor-in-chief at the Hammond Map Co. in Maplewood, N.J. Now, the Hammond map shows all 15 republics within the border of the Soviet Union, although each has a separate color.

Other map publishers, such as Rand McNally of Chicago and the American Map Corp. of Maspeth, N.Y., depict all the renegade republics firmly under Soviet control.

"We're not talking about any actual changes yet, only the potential for change," Rand McNally spokesman Conroy Erickson says.

Rand McNally adjusts for anticipated turmoil in world events by printing fewer of its

atlases "just so we don't have large quantities lying around that, when something happens, makes that publication obsolete," Erickson says.

Compared with the Soviet Union, German reunification was easy, he says. "We had advance notice. We were able to print our new atlases and maps five months ahead."

### Hard to predict

Mapmakers, as a group, don't like to gamble.

"It would have taken a fairly reckless person to predict five months ago that we would be in this situation," Erickson says. "Who would have thought the Ukraine? Moldavia? The situation in Yugoslavia?"

"We're holding our breath and waiting to see what happens," says Vera Benson, chief editor at the American Map Corp., publisher of *The Great World Atlas*. "Our policy is not to make any changes until it's ratified officially and sanctioned by our State Department."

The Baltic states, of course, were never recognized by the State Department as part of the Soviet Union, yet they appear on all maps as part of the U.S.S.R. The reason, cartographers say, is the fundamental rule of mapmaking: Show the de facto, or actual status, of an area.

### Business booming

If the fervent dreams of nationalists have caused problems for mapmakers, they also have provided marketing opportunities.

The focus of attention on the Soviet Union is bound to stimulate sales of globes, maps and atlases, the mapmakers say. Indeed, they saw sales of Middle East maps jump during the Persian Gulf crisis.

Rand McNally is considering a special edition to reflect the emerging nations, Erickson said.

Hammond is thinking about publishing a four-page insert that would have to be placed by hand in each atlas from the company's recently completed press run.

"Expensive? Absolutely, but a heck of a lot cheaper than reprinting something," Lees says. "But changes will be coming every week. Who knows when it will stop, or settle?"

...reprinted from the *CINCINNATI ENQUIRER*, August 27, 1991 issue.

**CALENDAR**

**SUSTAINING MEMBERS**

**November 21, 1991**  
Central Indiana Chapter Meeting

**December 11, 1991**  
Northwest Chapter Meeting & Christmas Party.  
At Mr. G's Restaurant, Cocktails 6:30, Dinner 7:30.

**January 15-17, 1992**  
40th Annual Convention, Indiana Society of Professional Land Surveyors, Holiday Inn, Columbus, Indiana

**January 28, 1992**  
St Joe Chapter Meeting

**January 30, 1992**  
Legislative Experience, 7:30 a.m. Breakfast, 8:00 a.m. Program, Westin Hotel, Indianapolis, Indiana

**February 6-8, 1992**  
Professional Land Surveyors of Ohio Conference, Stouffer Dublin Hotel, Columbus Ohio

**February 13-15, 1992**  
Kentucky Association of Professional Surveyors Annual Conference, Radisson Plaza Hotel, Lexington, Kentucky

**February 13-16, 1992**  
Illinois Professional Land Surveyors Conference, Chancellor Hotel & Convention Center, Champaign, Illinois

**February 18-21, 1992**  
Michigan Society of Registered Land Surveyors Annual Meeting, Holiday Inn, Lansing, Michigan

**February 29-March 5, 1992**  
ACSM/ASPRS Annual Convention, Albuquerque, New Mexico

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